

Generating Video Titles with MainActor

TITLE TOOL



The MainActor video editing software may appear to have only a rudimentary title generator. But with some tricks and special effects, MainActor can give you some impressive opening credits.

BY TIM SCHÜRMANN

You're back from vacation, your purse is empty, and your video cassettes are full of vacation memories. You edit the vacation video on your Linux PC. To put a final polish on your movie, all you need to do is add the credits. If you use MainActor for video editing, you will discover that the title generator, *2D Text*, is well-hidden and gives you only basic caption generating features. But never fear, a few tricks and a smattering of effects will help you create more pleasing titles.

Installation

MainActor is a commercial video editing program by MainConcept. The MainConcept homepage [1] has a test version; the

only restriction is that the test version adds a watermark to the finished video. When this issue went to print, binaries for Suse Linux and Mandrake were available as downloads. If you do not use one of these distributions, you should test MainActor on your distribution before you buy.

After installing MainActor with your distribution's package manager, you can pop up a terminal window and enter *mactor* to launch MainActor.

Titles in MainActor

Before you start, you might like to think about the structure and the material you have available. Titles are not only useful for the opening credits; they also help

the viewer keep track of what is happening when the scene or the action changes. For example, if you visited different places on vacation, you could use a title to give your viewers the location of each scene. Ideally, you should start thinking about possible captions while shooting the movie. For example, it is far easier to shoot the town sign than to add an artificial caption later.

If you can't find a "natural" caption, view the raw material first before you start editing. Slow panning or landscape views will give you useful backgrounds for your vacation movie. As an alternative, use a monochrome background (typically black) or a still image. In any case, the material for the background

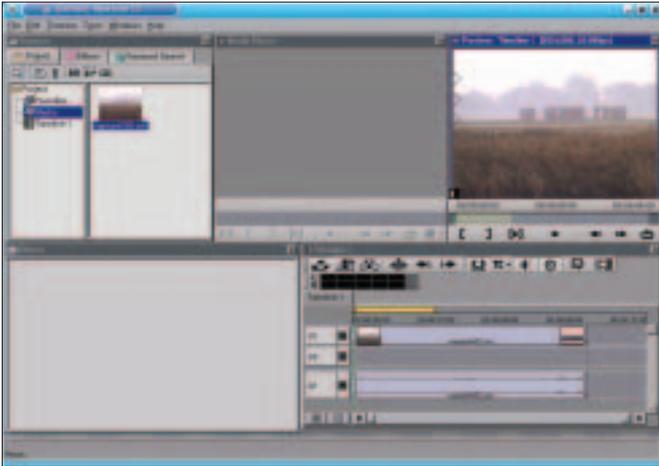


Figure 1: The background video is now in the timeline (lower right). The results are visible in the preview window (top right). You can scale the view up or down by clicking the + and - buttons on the lower edge of the timeline.

should not be too dominant or it will distract the viewer. Professional TV documentaries or big screen movies can help if you are looking for inspiration. The example we will be looking at in this article is based on the opening credits for "Finding Nemo." Start by displaying the producer ("The Millers") in a simple soft-focus font. This is followed by the title itself ("Vacation 2004"), which is slightly more elaborate. The background is a pan shot from the vacation movie, which leads to the first scene. The following steps all assume the video for the background is already on

your hard disk (see "Box 1: Welcome Aboard").

Background

To help you stay organized, first create a new timeline by selecting *Timeline / New*. When you do so, MainActor will add a new tab to the *Timeline* window. You can assign the captions to the tracks in the first tab; the second tab has the remainder of the movie. This arrangement is optional, but it does help you keep track when performing more complex video editing tasks (see "Box 2: Merging Timelines").

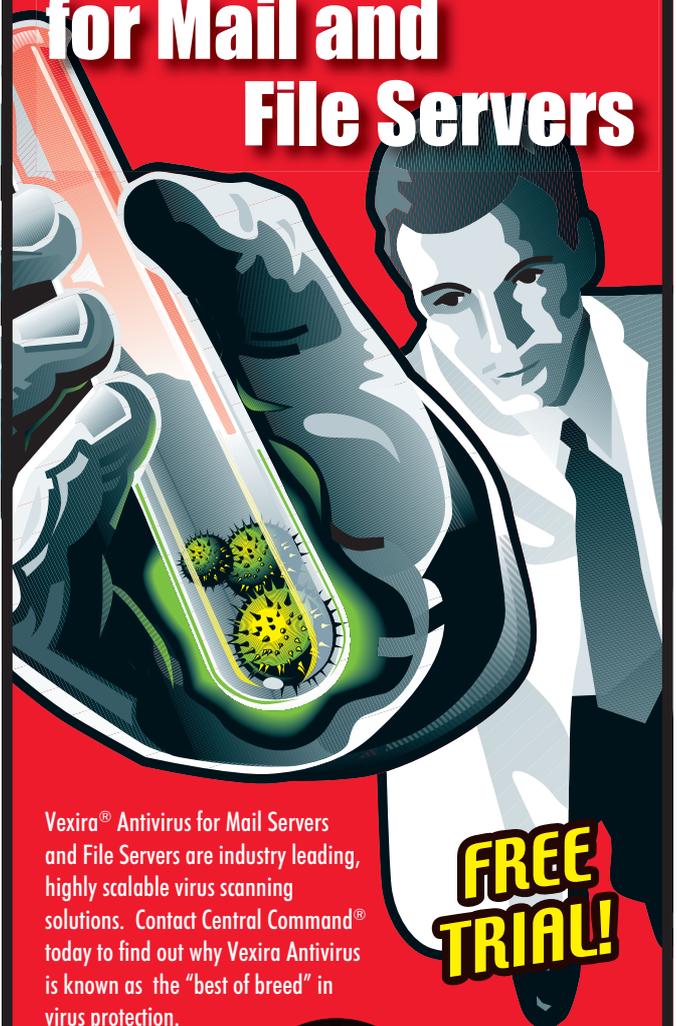
Now import the video material by selecting *Add*

Box 1: Welcome Aboard

MainActor's recording function is hidden below *Tools / MainConcept / DV Capture*. You need to attach your digital video camera to your computer's FireWire interface, and to set up your FireWire drivers properly, for this to work. Many modern computers have a FireWire port, and there are many sources for low-budget add on cards. After loading the drivers, select the interface and your camera model in *Capture Driver* and

Capture Device, respectively. Enter the filename and path that MainActor will be using to store the data in the *Capture File* box. Then click on the record icon (a small red button) to launch into the recording. If your distribution does not load the drivers correctly, open a terminal window, type *su* to become *root*, and type *modprobe raw1394*, followed by *modprobe ohci1394*. Then restart MainActor.

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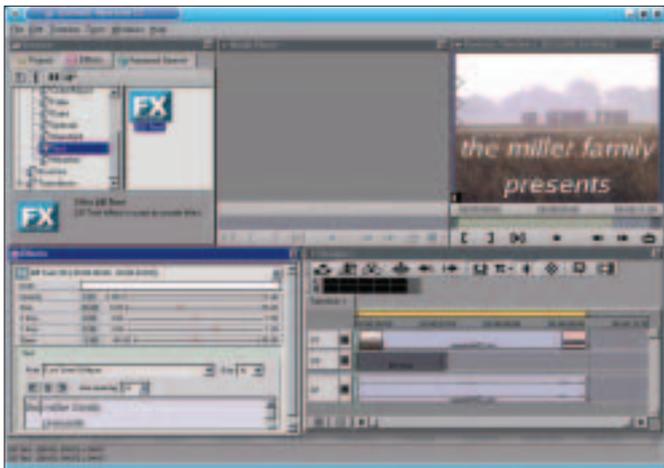


Figure 2: Go to the Effects tab to access the caption generator *2D Text*. The Effects tab provides a variety of options for spicing up the appearance of your captions.

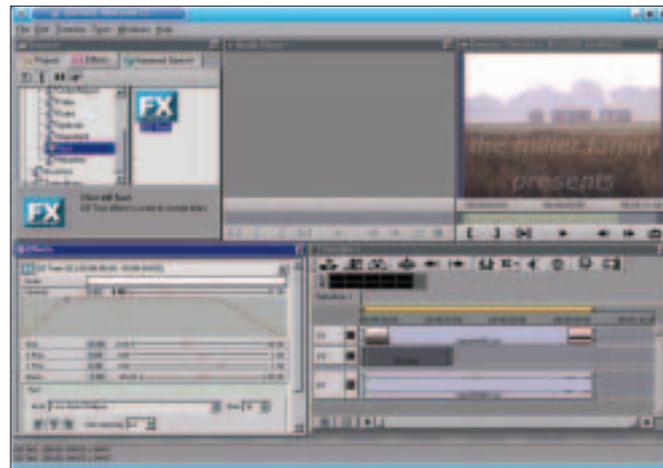


Figure 3: Choose a font without serifs for the title (lower left in the Effects window), as fonts of this kind are easier to read on the TV screen (upper right in the preview window).

multimedia files from the context menu in the *Browser* window. The leftmost icon in the button bar also takes you to this window. Now browse for the file and click *OK*. MainActor will create a new folder called *Media*, which you can open by double clicking. Drag the video from this folder and drop it onto the *V1* track in the timeline. A white frame shows you where the video landed when you released the mouse button. For our example, you need to place the frame as far left in the timeline as you can (see Figure 1).

Simple Title

The functions that the integrated caption generator *2D Text* gives us will be fine for the producer's name. The generator is located in *Filters / Text* in the *Effects* tab of the browser window (see Figure 2).

Drag the icon to the *V2* track in the *Timeline* window. The object that MainActor created has handles in the form of small rectangles on the left and right-hand sides. Click the right-hand handle and hold down the mouse button. The

rectangle turns gray. Drag the title to the right. The new start and end times, and the duration of the caption appear in a small, yellow tooltip window. Open up the element to display the whole text by holding down the left mouse button and dragging the mouse. When you can see the full text, release the mouse button.

As you can see in the preview window, the text still leaves a lot to be desired. To change this, double click on the *2D Text* element in the *V2* track. MainActor now shows you your options for the selected element in the *Effects* window (see Figure 3). First, type the text "The Millers" into the large text box and then, in a new line, type "present." Use the centering button to center the text, select a text without serifs, and choose a suitable font size. These steps are similar to working with a word processor.

At present, the text is somewhere down at the bottom of the screen; it may even have dropped off. To change this use the *X Pos* and *Y Pos* slide controls to move the caption into the center of the screen. Then select a *Color* that is easily distinguishable against the background.

Faders

If you now launch the movie in the preview window (by clicking the play symbol – a triangle pointing to the right), the caption suddenly appears and disappears. To make this transition smoother, you need to slowly increase and then decrease the *opacity* of the caption. However, just moving the slide control isn't going to help, as this would change

the value whenever the caption is visible. MainActor has a more granular way of doing this; in the *Effects* window, click on *Opacity*. This displays a so-called polyline (shown below the *Opacity* indicator in the *Effects* window in Figure 3).

The line shows you how the assigned value changes over a period of time. If the line is just a straight red line at the top edge, the text will be displayed at full opacity *1.0* for the whole duration. You will notice a small handle on the polyline. You can click the handle, hold down the mouse button, and drag the handle to another position. Watch how this affects the transparency in the preview window. The whole of the polyline is affected by this change. To modify this behavior, you need to add another handle. To do so, right click and select *Add Key* in the menu that appears.

MainActor refers to handles as keyframes or keys for short. They represent the images within a movie where a new setting starts to apply. Both

Box 2: Merging Timelines

As mentioned earlier on in the article, MainActor allows you to create and manage multiple timelines. For each new timeline, MainActor adds an icon to the *Project* tab browser window. You can use these icons like other media data. For example, to merge two timelines for simultaneous output, just drag the icon for the current timeline into the *Timeline* window.

Box 3: Stack Processing

The preview shows you how MainActor displays the caption over the video background. The timeline allows you to specify which elements are placed in the foreground and background. The tracks work like a stack of slides placed one on top of another. An object in track *V2* will always cover an object in track *V1*, for example. If you added another track (by selecting *Add video track* in the context menu), the elements in this track would cover the elements in tracks 1 and 2; that is, they would cover the caption.

keyframes can be moved freely and independently of one another along the polyline. Add two more keyframes and use them to draw a curve. The first keyframe starts with full transparency for the text, and the second indicates the point where full opacity is reached.

Because the timeline and the polyline are displayed in separate windows, it is impossible to tell which image the keyframe reflects, and vice versa. A slider helps you avoid detective work; a slider is a small, vertical, green line with a counterpart in the *Timeline* window. If you click a section of the *Timeline*, the slider moves to where you clicked, and the image below the slider is displayed in the preview window. To assign a specific frame as the keyframe, first move the slider to the desired position and then drag the keyframe to the green line.

Dressed Up

Let's use a trick for the main part of the title. The logo is a still image that we can cut and drop over the background. You can create the image with any graphics



Figure 4: The title logo - MainActor cuts out the green area and replaces it with the background.

package, such as the GIMP. There are, however, a few things you need to watch out for. First of all, the image should be the same size as the video. Most home video cameras today use the Digital Video (DV) format, and this is 720 by 576 pixels in Europe. If the image is a different size, MainActor will forcibly change the size of the original, which may cause noticeable distortion.

Bluescreen

To cut the image, MainActor uses the so-called bluescreen technique. This tech-

nique involves selecting a color that does not occur in the remainder of the image. MainActor replaces parts of the image where the selected color appears with the background image. The hues used for this are typically light blue or green, which do not occur in human faces, and that also explains the name. When you draw your title logo, you have to decide in advance which color you will be replacing later. The example in Figure 4 uses green.

After creating a title logo, save your logo and go back to MainActor. Use the browser window *Project* tab *Add multimedia files* drop-down menu to add the file to your project.

As you did with the text, drag the logo to the *V2* track in the timeline and drag the handles to extend the duration. Move the slider to a frame containing the logo to display it in the preview. This allows you to monitor the changes you will be making.

The *Color Keyer* effect, which is located below *Standard* in the browser window *Effects* tab, handles cutting the

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image. Drag the color keyer icon to the image with the title logo in the timeline. MainActor adds a small bar to indicate that an effect has been assigned. Double click the bar. Assuming that the properties of the 2D text are still on display in the *Effects* window, you can click on X to remove the entry. This moves irrelevant options out of sight.

First, choose the color that MainActor will be replacing with the background in the *Color Keyer*. To choose the color, first click on the color bar. You can then select a color directly in the window that appears, or grab the pipette and click on a part of the preview containing the color you need (see Figure 5). After you have chosen a color, click on OK. Don't be surprised if MainActor doesn't update the preview. If it doesn't happen automatically, you will have to update the preview manually.

Just like the producer's name, we want the title logo to fade in and out smoothly. You can follow the steps for the caption: once again, the polyline for *Opacity* is the one you need.

Output

Now that we've entered the opening credits for the movie, we can output the results. MainActor has a selection of output formats below *Timeline / Export*. If you are creating a DVD, select *Video + Audio*, and *MPEG*, below *Format*. Click on the *Format options* and select *DVD* below *MPEG Type*. *Frame size* should show DV resolution. Click on *OK* to go back, and type the filename in the *Export as* field. Make sure you disable the *Only export yellow In/Out segment*

Box 4: Formats Supported by MainActor

Import: DV AVI Multi File *.dzl (multiple type 1 files belonging to one movie); DV AVI Type 1 *.avi; DV AVI Type 2 *.avi; DV DIF *.dif, *.dv (RAW format); MJPEG *.avi, *.mjpg, *.mjpeg; MPEG *.mpg, *.mpeg, *.mmv, *.mpv, *.dat (MPEG1 und 2, VideoCD); MPEG Audio *.mpa, *.mp2, *.mpg2; Wave Audio *.wav; PNG; JPG; TIFF

Export video formats: MPEG 1 and 2; DV AVI

Export graphics formats: Amiga IFF; Bio-Rad confocal; CompuServe GIF; DKB Ray Tracer; DPX; Explore (TDI) & Maya; Gimp Pattern; ImageMagick; JPEGJIFF;

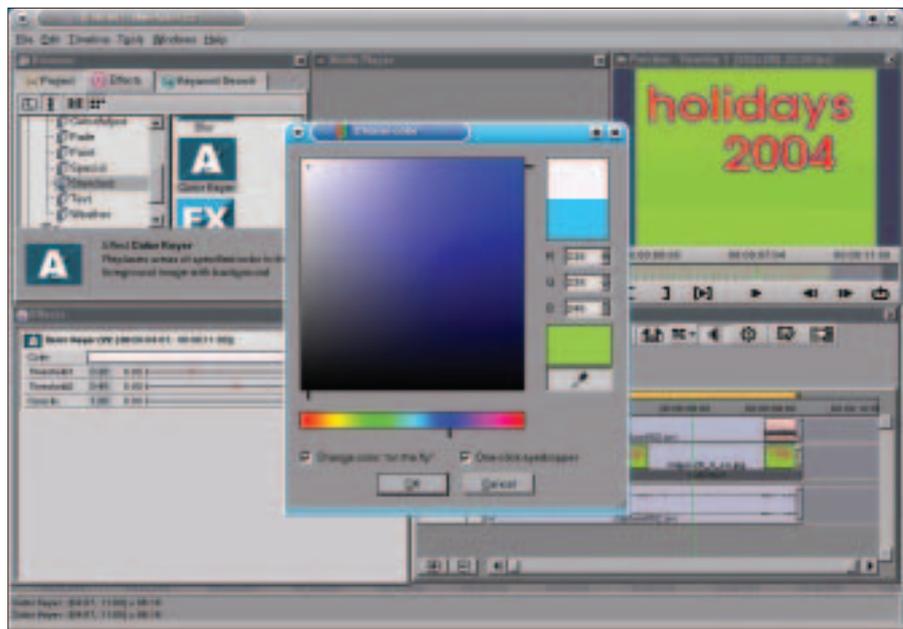


Figure 5: To select a color for the Color Keyer effect, first click on the pipette and then click on the green area in the preview window.

option. When you have everything set up, click *Export* to export the results.

Prospects

The method we have looked at allows a lot of creativity when designing captions. You could apply various MainActor effects to your logo. For example, to achieve a shimmering "Finding Nemo" style logo, drag the *Glue* effect from the *Filter / 2D-Warp* group in the browser window onto the logo in the timeline. Double click to open the settings in the *Effects* window and select *Effect -> Original* for *Progress*. This would make the logo shake the whole time, so to prevent this, add another keyframe to the polyline. The second keyframe should reach

the bottom edge before the position where the logo disappears. This allows the viewers to read the content before it fades out.

You can apply the *Color Keyer* effect to complete video sequences if you are interested in creating a typical newscaster and background image sequence.

You should use effects sparingly and in small doses. Think about whether your captions are appropriate to the content: for example, a garish, rotating and bouncing logo might not go down too well with a meditation video. ■

INFO

[1] MainConcept (MainActor vendor) homepage: http://www.mainconcept.com/index_flash.shtml

THE AUTHOR

Jörg Schumann originally studied music, intending to become a church musician, but then switched to mathematics and computer science to concentrate on programming. Jörg still spends a lot of his time investigating the music and computer science crossover area. In fact, whenever Jörg has time to spare, he enjoys tinkering with Linux computers and exploiting their sound-making capacity.

